PCBs in Building Materials at Malibu Schools

EPA is currently working with the Santa Monica-Malibu School District to address potential health concerns and environmental compliance issues arising from polychlorinated biphenyl (PCB) containing building material found at Malibu High School and Juan Cabrillo Elementary School.

EPA's National Approach to PCBs in Schools

PCBs in schools are not unique to Malibu. This chemical was widely used in building materials across the country, including in school construction, from the 1950s-1970s. Recent scientific studies, including a 2012 study by EPA's Office of Research and Development, show that the primary health concerns from PCBs in building materials, including window caulk, stem from the inhalation of contaminated air; and secondarily from contact with PCBs in dust and subsequent incidental ingestion. For this reason, EPA's national guidance for schools is to implement best management practices to focus on eliminating these potentially harmful human exposures to PCBs. These practices include frequent cleaning procedures and improved ventilation. Where schools are implementing the best management practices, EPA will consider such schools a low priority for enforcement unless there is a significant risk to public health.

Work Conducted at Malibu Schools

As part of an investigation by the District in 2013 to address health concerns at Malibu High School, the District voluntarily tested caulk, dust and air in approximately 10 rooms for PCBs. The tests showed air concentrations were below EPA's health-based guidelines. However, PCBs in dust levels were elevated and four caulk samples were above the regulatory level of 50 parts per million (ppm).

Under EPA oversight and consistent with national guidance, the school district conducted a comprehensive program of thorough cleaning and testing this summer at both the high school and Juan Cabrillo Elementary School. The work undertaken by the district appropriately focused on the human exposure pathways of greatest concern for school environments, specifically air, dust and soil, to make sure potential exposures meet health-based guidelines. The district's air and dust sampling has demonstrated that the rooms accessible to staff and students meet EPA health based guidelines.

To address the "unauthorized use" of PCB containing caulk greater than 50 ppm, in an email to EPA on August 15, 2014, the district amended their proposed cleanup plan by committing to abate the PCB containing window caulking in the four rooms within 10 months. The original plan submitted by the district proposed to abate the caulk in 15 years or less. The district also agreed to remove within one year any light fixtures potentially stained with PCBs from previously removed light ballasts. Following EPA's current process, the agency expects to finalize approval of the district's cleanup plan with a Toxic Substances Control Act (TSCA) approval letter.

The Public Employees for Environmental Responsibility (PEER) and Malibu Unites, represented by the Vititoe Law Group, sent us a notice of intent to sue EPA and the Santa Monica Malibu Unified School District consistent with TSCA section 20. The primary allegation in their notice is that continued use of PCB caulk at greater than 50 ppm is a violation of TSCA. The pending suit would seek the prompt identification and removal of caulk above 50 ppm at both Malibu High School and Juan Cabrillo Elementary School. The action relies in part on caulk testing conducted by PEER without the consent of the District.

Regulatory Background/Issues

Section 2605(e) of TSCA bans the manufacture, processing, distribution in commerce, and use of PCBs, unless the PCBs are used in a totally enclosed manner, such as in transformers. This section also provides EPA with the authority to promulgate regulations authorizing such activities in a "non-totally enclosed manner" if EPA finds that such activities will not present an unreasonable risk of injury to health or the environment. With limited exception, EPA's PCB regulations establish that building materials with PCBs at or above 50 ppm constitute an "unauthorized use" of PCBs. The statute and regulations do not require schools or building owners to test caulk or other building material to determine compliance with the 50 ppm threshold for unauthorized use.

In 1994, EPA proposed rules that would have authorized the continued use of PCBs in non-liquid building materials under certain conditions, including environmental monitoring to ensure that the continued use would not present an unreasonable risk. Following OMB inter-agency review, the provision was left out of regulations published in 1998.

Additional Information (September 25, 2014)

During the summer, the District conducted thorough cleaning of Malibu High School and Juan Cabrillo Elementary School. Based on the latest report we have, the District collected 163 air samples, and over 500 dust samples. Some of these samples were collected before cleaning and some after cleaning. None of the air samples collected after cleaning exceed applicable EPA established PCB Public Health Levels.

Two rooms currently have surface wipe sample results for dust above the agreed upon goal of 1ug/100cm2. These two rooms are the woodshop at Malibu High School and the Psychiatrist's office at Juan Cabrillo Elementary School and are not currently occupied. Further assessment is underway for these two rooms.

We expect the District to agree to remove all known caulk with PCB concentration above 50 ppm within 10 months. This removal will include caulk identified by outside parties, provided the location of the sample can be verified.

Comparison to New York City Schools

The major difference between NYC schools and Malibu is that air concentrations at NYC schools exceeded our applicable public health levels at least once in each of the five NYC pilot study schools, the only locations where air testing has occurred. Therefore, NYC took action to reduce the air concentrations, which included removing or encapsulating PCB sources. The air testing procedures used at Malibu High School and Juan Cabrillo Elementary school represent a "worst case" scenario. Windows and doors are shut and lights are kept on for 24 hours before the test and then tested for 24 hours under the same condition. In NYC schools, they are generally conducting the tests under "normal use" conditions, which typically means that, at a minimum, doors are left open (under summer conditions they will test with windows open). Even under the worst case testing scenario at Malibu, we do not see exceedance of our public health levels.

Public Health Levels for PCBs in Air

EPA's Public Health Air Guidelines for PCBs in schools were developed to remain protective of a broad-range of sensitive individuals or subpopulation groups, including pregnant women. The guidelines are based upon the PCB reference dose. EPA reference doses are chemical specific and the reference does for PCBs represents the amount of daily PCB exposure which is safe over an individual's lifetime. In addition, EPA's PCB reference does has incorporated a significant safety factor which helps the Agency account for any uncertainty in current research.